AMENDMENTS TO SPECIFICATION

Page 5, line 27 to Page 6, line 2:

Another existing technique used by the present invention is Turbo-coding, extensively developed in the past half-decade for use in European and Japanese Global System for Mobile Communications (GSM) wireless systems, which offers increased gain over straight Reed-Solomon encoding. The Turbo-coding technique is combined with the ~~above-mention~~ above-mentioned audio coding and with Forward Error Correction (FEC), preferably in the form of a convolution code added at the source and used at the receiver.

Page 8, line 23 to Page 9, line 13:

These objectives of the invention are accomplished, according to the principles of various preferred embodiments of the invention, by a combination of one or more of the following signal processing and broadcast techniques:

a. digital compression;

b. coding and error correction technologies such as, respectively, Advanced Audio Coding (AAC) audio compression, Recursive Systematic Convolutional Turbo Code encoding of the broadcast channel, and Unequal Forward Error Correction;

c. spread spectrum modulation of the uplink carrier, for example by direct sequence CDMA;

d. the addition of a narrow-band CW-modulated pilot tone for downlink synchronization;

e. use of redundant signals, either sent from two satellites or with a time delay in applications where terrestrial repeaters cannot be used due to interference ~~from~~ with terrestrial signals.

Page 14, lines 6-29:

Referring to Figure 2, radio frequency energy transmitted by the satellite is connected by an antenna 1 and amplified by a low noise amplifier 2. The output of the low noise amplifier 2 is applied to sync detection and demodulation units 5a, 5b, 5c, ..., each of which

includes an active carrier tracking processor 3 and a detection, demodulation, and synchronization processor 4, in order to recover timing signals in the satellite transmission. The timing signals and the original received and amplified signal are then applied to receiver channel processors 9a, 9b, 9c, . . ., each of which includes a spread spectrum decoder 6, demodulator 7, and error correction unit 8, for recovery of the baseband signals. The recovered baseband signals may then be buffered in buffer(s) 13, ~~and when sufficient baseband signals have been recovered,~~ combined in combiner 11 if two or more channels are involved, and processed by channel assembler 12 under control of a control processor 10. The output of the channel assembler 12 is supplied to a signal expander 14, if ~~lossless~~ compression has been used, and finally subjected to audio format processing by a processor 15, video format processing by a processor 16, digital-to-analog conversion and display by respective converters 18 and 19 and display 17, depending on the application.

Page 17, lines 8-16:

A separate, identical receiver channel processor is required for each channel being received at any one time. In the illustrated embodiment, receiver channel processor 9a is used for ~~the~~ a receiver control channel, processor 9b is used for the primary data channel, processor 9c is used for a signal received from a second satellite, and one or more receiver channel processors 9d et al are used for other purposes, such as for emergency or public service information.